

Training for Lay People on Basic Life Support Management in a Football Club

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Abstract—*The Basic Life Support comprises the set of measures used in the care of a victim cardiorespiratory arrest, aiming at maintaining their vital signs and preserving life, until a specialized team can transport it to a hemodynamics unit or intensive care unit and offer a definitive treatment. Objective: report the experience of members of an academic league of urgency and emergency in the provision of a lecture on Basic Life Support for lay people in a soccer club in the metropolitan region of Belém/PA, Brazil. Method: This is an experience report with a qualitative approach and participatory method, experienced by members of the interdisciplinary academic league in urgency and emergency, from the University of the Amazon, in the city of Belém/PA. Results and Discussions: The training of lay people in Basic Life Support using simulation plays a relevant role in improving the survival rates of cardiorespiratory arrest victims. Conclusion: The sharing and teaching of health professionals about first aid to society reveals that it is assimilating the theoretical potential in the practice that we understand and develop a quality in initial care.*

I. INTRODUCTION

Physical exercise in the conception of Caspersen *et al.* [1], its definition is the physical activity that is planned, structured and repetitive, aiming at maintaining and improving health, physical conditioning, body aesthetics or performance in competitions.

Sports or sport can also be associated with leisure, and not only professional, thus being a main activity developed by the person. And in this context, soccer is a sport that demands intermittent exercises, with varying intensity and duration, which require the athlete to have a good physical condition due to the physical effort performed [2].

The Basic Life Support (BVS) comprises the set of measures used in the care of a victim of Cardiopulmonary Resuscitation (CRP), aiming at maintaining their vital signs and preserving life, in addition to avoiding the worsening of existing lesions, until a specialized team can transport it to a hemodynamics unit or intensive care unit and offer a definitive treatment [3].

In the Brazilian population, cardiovascular diseases (CVD) are estimated to be responsible for at least 20% of deaths of people over 30 years of age, with the Brazilian northeast showing an increase in the number of deaths in 27% in the total population, 33% in men and 18% in women [4].

According to Oliveira *et al.* [5], it was found that in Pará there was an increase in the mortality rate due to cardiac involvement in the last two decades, as well as lower rates of mortality reduction due to strokes in the North region compared to the South, Southeast and Midwest regions.

In this context, the final event of CVD is represented by cardiorespiratory arrest, which culminates in a series of clinical conditions, because cardiac output is reduced, which decreases blood flow to the coronary arteries, and consequently an acute ischemia, irreversible pathophysiological changes that can lead to cell or tissue death, cerebral edema and increased intracranial pressure resulting in irreversible brain lesions if the necessary measures such as resuscitation maneuvers are not taken. [6] [7].

The simple performance of a layman, who quickly recognizes a PCR and calls for specialized help, prevents myocardial and cerebral deterioration. First Aid are procedures of high relevance for all population segments and refer to the temporary and immediate care of people who are injured or suddenly ill [8].

In some countries in Europe, the teaching of CPR aims to prepare and form effective communities to meet the CPREH [9]. Thus, immediate and adequate care to the victim of Cardiorespiratory Arrest, done through BVS, is fundamental to define its survival.

In this sense, it is necessary to provide qualified help, with theoretical and practical training, including aspects related to the importance and way of functioning of emergency assistance networks, such as the Mobile Emergency Care Service (SAMU). Considering that, one of the principles of the Unified Health System (SUS) is popular participation for the promotion, prevention and maintenance of health, it is worth noting that the training of the population in first aid and risk assessment in emergency situations contributes significantly to the

reduction of injuries and mortality of the people who make up society [8].

This article aims to report the experience of members of an academic league of urgency and emergency in the provision of a lecture on Basic Life Support for lay people in a soccer club in the metropolitan region of Belém/PA, Brazil.

II. METHODOLOGY

This is an experience report with a qualitative approach and participatory method, experienced by members of the interdisciplinary academic league in urgency and emergency, from the University of the Amazon (UNAMA), in the city of Belém/PA.

The league members were invited to give an educational lecture, aimed at the management of SBV. The action was held at a football club in the city of Belém in October 2019. The study included parents and guardians of athletes who are players of the base team, aged between 10 and 14 years, in a structured environment for training, with practical scenarios organized within the club.

In total, two interactive educational interventions were carried out in twodays, using realistic simulation about BVS maneuvers, for about 30 people each day.

Parents and guardians were instructed to perform resuscitation maneuvers according to the assumptions of resuscitation science proposed for the SBV by the *American Heart Association protocol* in 2019.

The following materials and methodological resources were listed: media resource, image projector, internet, dummy simulator (*Resusci Anne - LAERDAL®*) for cardiorespiratory arrest training. The execution and management of all simulation processes were carried out by members of the academic league.

The type of intervention used was the realistic simulation, which is based on the use of techniques in daily life that allows greater immersion in specific situations, staging a scenario that enables training, in order to assist in the prevention of cases within the desired practice [10].

The action was divided into two moments: in the first, the people present were sensitized about the basic concepts about the out-of-hospital survival chain, with the use of slides in *Microsoft PowerPoint*, video and images that exemplified all the teaching explained there to them. In the second moment, people were sent to a wider space, so that the students of the league could more freely minister the practical part about the training. The training, as well as the theoretical part of the lecture, followed the

recommendations for laypeople published in the *Guidelines of the American Heart Association 2019*.

In the practical part, there was an example using a common case, which was the case of a person fainting on public road. The students explained the step by step of all that was necessary, following the protocol, explaining in practice the links that make up the survival chain focused on THE BVS and the care of extrahospital PCR for laypeople, carefully approached at each stage, not only explaining what should be done, but why each attitude, causing reflection of all the people there on the steps demonstrated.

After the practical demonstration, some people were called so that they could put into practice what they learned there all that was exposed there through the students. This type of approach is based on "Evidence-Based Practice", which according to Danskiet *al.* [11]. This type of approach seeks to evaluate the quality of the exposure of facts to those being taught, and thus can correct possible flaws that occurred in the teaching/learning process.

After opening space to parents and guardians, they asked several doubts from their mistakes, and thus, the academics were able to elucidate even more comprehensive issues, such as after-hospital care, for educational purposes, and about the use of automatic external defibrillators (AD), which is not yet a reality when it comes to BVS for lay people in Brazil.

III. RESULTS AND DISCUSSIONS

The event was extremely important for the participants to acquire knowledge about Basic Life Support. Therefore, lay listeners will be better prepared to deal with a PCR situation. It is essential that more people seek training and get notions of the SBV.

In the number of people present, many did not have the discernment of how to act in a PCR emergency. This fact provided a productive lecture due to the willingness of the participants to acquire this knowledge in the area.

In a Brazilian study with lay people, about 41% of the interviewees knew about the BVS, however, only 5.8% of the participants felt prepared to apply the protocol. A strategy that can facilitate the training of the general population is the inclusion of BVS training in school curricular, initially focusing on children from the age of ten, because they constitute a more conscious, easily accessible and self-motivated group [12].

Danskiet *al.* [11] reports that the teachings taught to lay people should be based on evidence-based practice, because teaching should seek methodological paths that

are already presuppositions in the literature, seeking a pattern of teaching among a community, in the purpose of a common goal.

In each subject addressed and, in the managements, presented, several questions and arguments were asked, in which it allowed a greater approximation of the participants to the speakers, with the willingness of the children when they were victims, because the main focus of the lecture was how to demonstrate support to children if they suffer some intereventuality in games and championships by the football club. Of the most emphasized subjects, the main ones were: contusions, traumas, CRP, CPR, epileptic crisis, convulsive crisis and choking.

The need for first aid education for lay people is intended to save lives. However, knowledge of skills and attitudes to be taken in emergency situations require educational resources such as lectures, training, practical and theoretical activities [13].

The participants were surprised about the management and materials used in the first victim care, in case of urgency and emergency, where two caps, shoelaces or bandages were used for the immobilization of the cervical spine, and the immobilization of the upper and lower limbs, shoelaces, bandages, shirts and cardboard. Such teachings with certain materials were transmitted in cases where the person does not come to have equipment due for intercurrent care, then was provided great curiosity and willingness to learn in the parents and guardians of the athletes of the club in relation to management and use of materials. With the experience, the importance of knowing and knowing how to perform the basic managements for first aid was achieved.

CRP is the leading cause of death in developed and developing countries, occurring mainly in extra hospital environments. In view of this global panorama, considered a current public health problem, the training of lay people in BVS using simulation plays a relevant role in improving the survival rates of CRP victims [14].

Recognizing situations that endanger the life of human beings can be one of the principles of BVS techniques. Even if the mastery of these techniques is only acquired over time and with an effective practice, understanding the need for immediate help to a victim, and a basic knowledge of the necessary conducts, such as emergency phone numbers, is something that every citizen should know, whether an adult or child. It's something that can determine the death, or survival of the victim [15].

IV. CONCLUSION

Sporadic educational actions such as giving a lecture are important in the socio-educational development of the population, regarding BVS and how to act in front of these events. The sharing and teaching of health professionals about first aid to society reveals that it is assimilating the theoretical potential in the practice that we understand and develop a quality in initial care.

In this sense, we conclude the transcendence of the SBV as teaching in the health education of the population, in view of the results exposed in this study, we highlight the impact that can have on people's quality of life, through the reduction of morbidity and mortality.

The realization of projects in this educational level transcends the wall of universities, enabling the knowledge obtained by the members of the academic league to be shared with the community in general, giving a return from the collective and active construction, occurring mutual benefits, in which the community and students learn and share knowledge for the growth and improvement of health.

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